

**ASSESSMENT DEGRADATION OF DYE (CONGO RED) BY  
FENTON'S REAGENT PROCESS WITH LIGHT AND WITHOUT  
LIGHT**

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## **ABSTRACT**

### **ASSESSMENT DEGRADATION OF DYE BY FENTON'S REAGENT PROCESS WITH LIGHT AND WITHOUT LIGHT**

Development of textile industry will generate a huge amount of effluent from this industry. These effluents can contaminate the environment especially water. They also very toxic and can cause cancer. Because of that, a research must be conduct to find the solution for this problems. This paper consists of a method in treating dye wastewater called Fenton's reagent (reaction from hydrogen peroxide,  $H_2O_2$  and ferrous ion). This experiment was handled in two ways which is in presence of light and without ontribution of any light (dark place). Congo red (CR), a common dye in this industry is used to act like wastewater. The results found that Fenton's reagent process is very effective in oxidising dye wastewater, but the presence of scavengers will retard the effectiveness of this process. The higher the concentration of scavengers, the lesser the effectiveness of the Fenton's reagent process and vice versa. The presence of visible light will increase the effectiveness of this Fenton's reagent process. This experiment also found that  $CO_3^{2-}$  is the strongest radical  $\cdot OH$  scavenger.